7) CLAIMS:

1. A method for the treating multiple myeloma comprising administering to an individual a therapeutically effective amount of a composition comprising an antagonist of an interaction between an alpha4 subunit-bearing integrin and a ligand for an alpha4 subunit-bearing integrin.

2. The method of claim 1, wherein the antagonist is an alpha 4 integrin binding agent.

3. The method of claim 1, wherein the antagonist is an alpha4 integrin ligand binding agent.

4. The method of claim 2, wherein the alpha 4 integrin binding agent is selected from the group consisting of; a) an antibody homolog that antagonizes the interaction of both VLA-4 and alpha4 beta 7 with their respective alpha4 ligands; b) an antibody homolog that antagonizes the interaction of VLA-4 with its alpha4 ligand; and c) an antibody homolog that antagonizes the interaction of alpha4beta7 with its alpha4 ligand.

5. The method of claim 4, wherein the antibody homolog is selected from the group consisting of a human antibody, a chimeric antibody, a humanized antibody and fragments thereof.

6. The method of claim 3, wherein the alpha4 integrin ligand binding agent is an anti-VCAM-1 antibody homolog.

7. The method of claim 6, wherein the antibody homolog is selected from the group consisting of a human antibody, a chimeric antibody, a humanized antibody and fragments thereof.

8. The method of claim 1, wherein the antagonist is a small molecule.

9. A method of claim 1, wherein the composition is administered at a

dosage so as to provide from about 0.1 to about 20 mg/kg body weight.

10. A method for inhibiting bone resorption associated with tumors of bone marrow, the method comprising administering to a mammal with said tumors an antagonist of an an interaction between an alpha4 subunit-bearing integrin and a ligand for an alpha4 subunit-bearing integrin, in an amount effective to provide inhibition of said bone resorption.

11. The method of claim 10, wherein the antagonist is an alpha4 integrin binding agent.

12. The method of claim 10, wherein the antagonist is an alpha4 integrin ligand binding agent.

13. The method of claim 11, wherein the alpha4 integrin binding agent is an anti-VLA4 antibody homolog or anti-alpha4beta 7 antibody homolog.

14. The method of claim 13, wherein the antibody homolog is selected from the group consisting of a human antibody, a chimeric antibody, a humanized antibody and fragments thereof.

15. The method of claim 12, wherein the alpha4 integrin ligand binding agent is an anti-VCAM-1 antibody homolog.

16. The method of claim 15, wherein the antibody homolog is selected from the group consisting of a human antibody, a chimeric antibody, a humanized antibody and fragments thereof.

17. The method of claim 10, wherein the antagonist is a small molecule.

18. A method of claim 10, wherein the antagonist is administered at a dosage so as to provide from about 0.1 to about 20 mg/kg, based on the weight of the individual.

19. The method of claim 17, wherein the antagonist is administered in an amount effective to provide a dosage of small molecule of about 0.1 -30 mg/kg body weight.

20. A method of treating a subject having a disorder characterized by the presence of osteoclastogenesis, the method comprising administering to the subject an antagonist of an interaction between an alpha4 subunit-bearing integrin and a ligand for an alpha4 subunit-bearing integrin, in an amount sufficient to suppress the osteoclastogenesis.

21. The method of claim 20, wherein the antagonist is an alpha4 integrin binding agent.

22. The method of claim 20, wherein the antagonist is an alpha4 integrin ligand binding agent.

23. The method of claim 21, wherein the alpha4 integrin binding agent is an anti-VLA4 antibody homolog or an anti-alpha4 beta 7 binding agent.

24. The method of claim 23, wherein the antibody homolog is selected from the group consisting of a human antibody, a chimeric antibody, a humanized antibody and fragments thereof.

25. The method of claim 22, wherein the alpha4 integrin ligand binding agent is an anti-VCAM-1 antibody homolog.

26. The method of claim 25, wherein the antibody homolog is selected from the group consisting of a human antibody, a chimeric antibody, a humanized antibody and fragments thereof.

27. The method of claim 20, wherein the antagonist is a small molecule.

28. The method of claim 20, wherein the antagonist is administered at a

dosage so as to provide from about 0.1 to about 20 mg/kg body weight.

29. The method of claim 27, wherein the antagonist is administered in an amount effective to provide a dosage of small molecule of about 0.1 -20 mg/kg body weight.